

APPLICATION
FOR
UNITED STATES LETTERS PATENT

APPLICANT NAME: Russell E. Parks et al.

TITLE: SKILLS MATCHING APPLICATION

DOCKET NO.: FIS9-2000-0282

INTERNATIONAL BUSINESS MACHINES CORPORATION
NEW ORCHARD ROAD, ARMONK, NY 10504

CERTIFICATE OF MAILING UNDER 37 CFR 1.10
I HEREBY CERTIFY THAT, ON THE DATE SHOWN BELOW
THIS CORRESPONDENCE IS BEING DEPOSITED WITH
THE UNITED STATES POSTAL SERVICE IN AN ENVELOPE
ADDRESSED TO THE ASSISTANT COMMISSIONER FOR
PATENTS, WASHINGTON, D.C. 20231 AS "EXPRESS MAIL
POST OFFICE ADDRESSEE"
MAILING LABEL # EK082873890 US
On 11/1/01
Karen Cinq-Mars
Name of person mailing paper

Karen Cinq-Mars 11/1/01
Signature Date

SKILLS MATCHING APPLICATION

DESCRIPTION

BACKGROUND OF THE INVENTION

Field of the Invention

5 The present invention generally relates to procuring technical services from contractors and, more particularly, to a Web based skills matching application that facilitates the procurement process for technical services contractors.

Background Description

10 Considerable attention has been devoted to improving the methods used to procure components and hardware in manufacturing many products, including for example automobiles and computers. Recently, these processes have migrated to the Internet allowing for fast, efficient and cost-effective procurement from a variety of suppliers. However, the procurement of services, and especially technical services, has not received the same attention. The process is still a matter of advertising, using third party employment services and other intermediaries. Responses are slow and there is the possibility when working through third parties that requests are incomplete or inaccurate, resulting in responses that do not meet the requirements. Since the 15 technical services required may be for an immediate although temporary need, some better way needs to be developed in order to timely respond to a specific need for technical services.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a tool that allows a user, such as a hiring manager, to communicate requirements to technical service suppliers in a way that significantly reduces the process time and improves the accuracy of requests sent to suppliers.

According to the invention, there is provided a Skills Matching Application (SMA) which is accessed from a Requisition/Catalog (REQ/CAT) application, which may be either a Web-based application or a standalone application. A user who needs to request a technical contractor accesses the REQ/CAT application (or goes directly to the SMA Universal Resource Locator (URL)) which brings the user to the SMA Web site. The SMA application, after requiring a password and profile (for first time access) to be entered, takes the user through a series of screens which prompts the user to enter a Statement of Work (SOW) and complete a skills detail checklist for each of the technical skills requested. Some of the information required to be entered are the following:

- a) type and skill required, i.e., programmer, network specialist, database administrator, etc.;
- b) level of the skill;
- c) proficiency level of specific operating systems, programming languages and tools required of the candidate;
- d) work location, on-call, weekend work, experience required for position, etc.;
- e) other related SOW information; and
- f) file attachments can also be included.

Once the request is completed, it is submitted to contracted suppliers (individual contracted suppliers versus all contracted suppliers can be identified by the requestor) who are sent an e-mail notification. The

notification notifies the supplier that a new request has been entered into the SMA application for them to review and submit a candidate against. This e-mail has a standard formatted attachment which contains the statement of work and skills detail checklist. The SMA application has the capability to 5 identify suppliers as primary, secondary, and so on for a skill and send the request immediately to the primary and, after a first predetermined number of days, to the secondary and, after a second predetermined number of days, to the next and so on. The requestor can cancel the request, and the SMA tool sends an e-mail to all suppliers who were sent the request. e-mail notifications 10 are sent to suppliers when the requestor performs any action against the request and *vice versa*.

The suppliers, when they receive an e-mail request, access the Web site database to view the request details. Suppliers can also use the e-mail notifications and attachments to load into their local systems. Each supplier 15 has the option of accessing the SMA Web site or generating and transmitting a batch interface to SMA to submit candidates and appending resumes as appropriate. The supplier provides a response to the SOW by responding to the entries with the candidate's skills, experience, etc. The supplier enters the candidate's name and wage (if different from the agreed to rate for that region 20 or skill).

The requestor will receive an e-mail notification each time the supplier submits a candidate. The requestor then accesses the SMA Web site and views the supplier responses and associated resumes and can either accept or reject each candidate submitted but cannot accept more than the number of 25 candidates requested. Once the requester accepts the candidate(s), the request is considered closed and the request is archived after the next SMA batch process is complete. The requestor then submits the candidate(s) to the REQ/CAT Web site where it is assigned to a requisition. The requester then completes the requisition (i.e., adding travel and other related expenses, etc.)

and then moves through the requisition approval process. When the SMA is used as a standalone application, the requestor uses the tool to source the contractor requirement and then would go to the requisition system to complete the transaction.

5 Once the requisition is approved in the REQ/CAT Web site, it is sent on to SAP procurement system for conversion to a purchase order and transmission to a supplier. Status changes, i.e., submitted, pending, sent to REQ/CAT, and Approved (in REQ/CAT Web site), and purchase order (PO) number from SAP are reflected in the status field on the SMA database.

10 In addition to the process defined here, the SMA application supports a Renewal, Known Candidate and "Submit Requisition Directly to REQ/CAT Web" process. The renewal process is used to "renew" a technical subcontractor who is already working for the company. Known items are the candidate(s) name(s) and supplier. These requests are only sent to the supplier
15 15 who is already providing the candidate(s). The Known Candidate function is used to send a request to a supplier for a candidate that has already been identified. The "Submit Requisition Directly to REQ/CAT Web" process is used when the requestor knows the candidate(s) name(s), the supplier and the rate to be charged. These requests are not sent to suppliers; rather, the request
20 20 when completed is sent directly to the REQ/CAT Web site.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, aspects and advantages will be better understood from the following detailed description of a preferred embodiment of the invention with reference to the drawings, in which:

25 Figure 1 is a block diagram of the architecture of the technical services skills matching application according to the invention; and

Figure 2 is a block diagram showing the data flow of the technical

services skills matching process.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

Referring now to the drawings, and more particularly to Figure 1, there is shown the architecture of the Skills Matching Application (SMA). A user of the system (the requester) accesses requisition/catalog (REQ/CAT) Web site 101 and uses an internal REQ/CAT application running on an intranet to generate a request for technical services. The entry point to the SMA internal intranet site application 102 is via the REQ/CAT Web (RCW) application.

The requestor would log in to the REQ/CAT Web site and select the Technical Services Catalog. The requestor is directed to the SMA via the RCW application. After requiring a password and profile (for first time access), the SMA application takes the requestor through a series of screens which asks them to complete a statement of work (SOW) and complete a skills detail checklist for each of the technical skills they are requesting. Some of the information required to be entered at the following:

- a) type and skill required, i.e., programmer, network specialist, database administrator, etc.;
- b) level of the skill;
- c) proficiency level of specific operating systems, programming languages and tools required of the candidate;
- d) work location, on-call, weekend work, experience required for position, etc.;
- e) other related SOW information; and
- f) file attachments can also be included.

The requester then provides the details of the technical requirement and submits this request either to the suppliers or back to the requisition system

RCW.

As shown in Figure 1, the requester can access an unknown candidate or a known candidate. In the more typical scenario, the requester accesses an unknown candidate, creating the SOW in response to the screens presented by the SMA application. Once the request is completed, it is submitted to contracted suppliers via e-mail notification. Individual contracted suppliers versus all contracted suppliers can be identified by the requester. The SMA external Internet site 103 is accessed by the suppliers when they receive the e-mail notification. This e-mail notification to the suppliers notifies the suppliers that a new request has been entered into the SMA application for them to review and submit a candidate(s) against. This e-mail has a standard formatted attachment that contains the SOW and skills detail checklist.

Sub a 1
15 The SMA application has the capability to identify suppliers as primary, secondary, tertiary, etc., for each skill. The SMA application will send the request immediately to the primary and after a predetermined number of days to the secondary, and so on. The number of days between e-mail notifications are variables which can be changed the by the SMA application administrator. The requester can cancel the request at any time, in which case and e-mail is sent to all suppliers who were previously sent a notification of the request. In general, e-mail notifications are sent to suppliers when the requester performs any action against the request and *vice versa*.

20
25 The suppliers then access the Web site database to view the request details. Suppliers can also use the e-mail notifications and attachments to load directly into their local systems. Each supplier can access the SMA Web site 103 to respond to the request or respond directly. A supplier reviews the requirements and then submits candidates back to the requester. The supplier provides a candidate(s) by accessing the SMA Web site, submitting candidate(s) and appending a resume(s) as appropriate or directly from the supplier internal system.

The requester views the supplier responses and associated resumes. The requester can either accept or reject each candidate submitted, but cannot accept more than the number of candidates requested. The RCW/CAT approval process in block 104 is invoked when a candidate has been selected for an assignment and the requester management approval process is started to complete the requisition. Block 105 represents the "SAP Procurement Process". SAP is the system that completes the requisition process and transmits the Purchase Order (PO) to the supplier for billing and payment. The linkage with the REQ/CAT Web application and the supplier is shown in more detail in Figure 2. The requester (client) accesses the REQ/CAT Web 201 and invokes the REQ/CAT Web application at 202 to create a requisition. This process invokes the Skills Matching Application (SMA) 220 which prompts the requester to enter requirements or SOW at function block 221. A determination is made in decision block 222 as to whether this is new request or renewal with a core supplier. If so, the requester is prompted to select suppliers in function block 223. The requester is next prompted to submit requirements (or SOW) in block 224. This information is then passed to the supplier via the Internet after e-mail notification. In function block 250, the supplier reviews the requirements (or SOW). A response is made in function block 251. The supplier attaches the resume(s) and submits candidate(s) in function block 252 with the response. The requester views the candidates submitted and selects candidate(s) in function block 225. A request to create a requisition is submitted by the requestor in function block 226, and this request is exported to the REQ/CAT Web application. The REQ/CAT Web application imports candidate and pricing in function block 203, and enters approval routing in function block 204. The request is submitted for approval in function block 205. A submitted request is processed for approval in function block 206. Once approved, the request is submitted to the SAP procurement system in function block 207.

In addition to the process described above, the SMA supports two other processes. The first of these is the submission of a request to a specific supplier. This is the situation mentioned above in the description of Figure 1 where the candidate is known (either a new request or a renewal). This process
5 is used to renew or request a technical subcontractor from a core supplier who in some circumstances may already be working for the requester and needs to be extended or a technical subcontractor who, having previously worked for the requester, is someone the requester specifically wants for a new job.
Known candidate requests are sent to that supplier who is already providing
10 the candidate. The other process is a request to the REQ/CAT application for a known candidate and a known rate to be charged. These requests are not sent to the supplier who is providing the candidate, but are simply completed and sent directly to the REQ/CAT Web application.

While the invention has been described in terms of a single preferred
15 embodiment, those skilled in the art will recognize that the invention can be practiced with modification within the spirit and scope of the appended claims.